

Abstract

A projection objective having a variable focal length, preferably serving to image tilting mirror matrices or reflecting and/or transmitting LCDs, said projection objective comprising three groups of lenses (G1, G1, G3) arranged on a common optical axis, wherein, starting from the side facing the projection screen, the first lens group (G1), serving the purpose of focussing, and the second lens group (G2), serving the purpose of varying the focal length, are arranged on the optical axis in a variably positioned manner, and the third lens group (G3) is stationary.

According to the invention, the following condition is met:

$$1.0 h_{\max} < d_{G2-G3} < 1.5 h_{\max}$$

10 and

$$s \leq 10 \text{ mm},$$

wherein h_{\max} is the maximum object height, d_{G2-G3} is the distance between the lens group G2 and the lens group G3 in a first position, and s is the object-side intercept distance or distance from the vertex to the object.